

What is claim d is:

1. A substrate assembly for a gas discharge panel,
comprising a dielectric layer and a protective layer of MgO
being formed in this order on a substrate having electrodes,
5 wherein the dielectric layer is a laminate of an organic
dielectric layer and an inorganic dielectric layer in this order
from a side of the substrate.
2. The substrate assembly for a gas discharge panel of
10 claim 1, wherein the organic dielectric layer is made of a
material selected from polyimide, polyamide imide,
polysiloxane and polysilazane.
3. The substrate assembly for a gas discharge panel of
15 claim 2, wherein the organic dielectric layer is made of a
material selected from polysiloxane and polysilazane each
having a side chain selected from alkyl, alkoxy and aryl.
4. The substrate assembly for a gas discharge panel of
20 claim 1, wherein the inorganic dielectric layer is made of a
material selected from a group consisting of SiO₂, Al₂O₃, TiO₂,
ZrO₂, AlN, Si₃N₄ and SiC, and a mixture of two or more thereof.
5. The substrate assembly for a gas discharge panel of
25 claim 1, wherein the inorganic dielectric layer is made of a

metal oxide having a smaller bond distance between an oxygen atom and a metal atom than the wavelength of an atom vacuum ultra violet ray.

5 6. The substrate assembly for a gas discharge panel of claim 1, wherein the organic dielectric layer has a smaller dielectric constant than that of the inorganic dielectric layer.

7. The substrate assembly of claim 1, wherein the
10 organic dielectric layer has a thickness of 5-20 μ m and the inorganic dielectric layer has a thickness of 0.5-2 μ m.

8. The substrate assembly of claim 1, wherein the protective layer has a thickness of 0.5-1.5 μ m.

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9. A process for manufacturing a substrate assembly for a gas discharge panel, comprising:

forming an organic dielectric layer on a substrate;

forming an inorganic dielectric layer on the organic
20 dielectric layer by a sol-gel, a sputtering or a vapor deposition process;

forming an organic compound layer containing Mg on the inorganic dielectric layer; and

firing the organic compound layer to form a protective
25 layer of MgO.

10. A gas discharge panel, comprising:

a substrate assembly as disclosed in claim 1 disposed on a front side of the panel as a front substrate assembly;

5 a rear substrate assembly facing the front substrate assembly; and

a discharge space formed between the front and rear substrate assemblies,

wherein the rear substrate assembly is provided with
10 barrier ribs for defining the discharge space and phosphors, the barrier ribs being formed on a substrate having electrodes, the phosphors being formed on side walls of the barrier ribs and on the substrate defined by the barrier ribs.